LWG
LOWER WILLAMETTE GROUP

January 20, 2010

Eric Blischke
Chip Humphrey
United States Environmental Protection Agency
805 S.W. Broadway, Suite 500
Portland, OR 97205

Re: Portland Harbor Superfund Site; Administrative Order on Consent for Remedial Investigation and Feasibility Study; Docket No. CERCLA-10-2001-0240
EPA Preliminary Comments on the Baseline Human Health and Ecological Risk Assessments

Dear Eric and Chip:

The Lower Willamette Group has completed an initial review of EPA's December 23, 2009 Preliminary Comments on the Baseline Human Health and Ecological Risk Assessments for the Portland Harbor Superfund Site. The LWG appreciates EPA's acknowledgement that the BHHRA and BERA are generally consistent with and follow the procedures agreed upon by EPA and the LWG for completing the baseline risk assessments.

On January 6, 2009, EPA agreed to extend the deadline for invoking dispute resolution on directed changes in the preliminary comments to January 20, 2009. In a telephone conversation January 19, EPA also confirmed that only the ten numbered comments identified as "Risk Assessment Modifications to be Incorporated into the Draft Feasibility Study" (pages 11-12) are directive at this time. Based upon our discussions with EPA in the last week, the LWG understands that the directed comments do not require a revision to the preliminary AOPCs (as identified in EPA's June 23, 2009 letter) to be carried forward into the Feasibility Study. The LWG acknowledges that these preliminary AOPCs may be modified as the Feasibility Study progresses, but understands that EPA does not intend these directed comments to redefine the preliminary AOPCs prior to initiation of the Feasibility Study. We further understand that EPA and LWG will continue to discuss some of these directive comments as they pertain to finalization of the risk assessments and subsequent risk management decisions, particularly given that discussion of many of these issues is ongoing (e.g., the meeting scheduled for January 22, 2010 to discuss the Logistic Regression Model and other details of the benthic toxicity risk assessment), and need not dispute their application in the final risk assessments at this time. If our understanding is correct, we agree that we can continue the development of the FS on an expedited schedule and look forward to further discussing the details of EPA's comments in the context of FS development.

If our understanding is incorrect, we request that EPA extend the deadline for dispute resolution until at least February 3, 2009 so that we may have further discussion of these issues. In the alternative, we respectfully dispute the directed changes for the following reasons and as discussed in the attached table. We object to Directed Comment #1 (use of the Logistic Regression Model) on the ground that the model does not meet technical reliability criteria and cannot be presumed to be predictive of sediment toxicity at the bulk chemistry stations. We object to Directed Comment #2 (use of the Transition Zone Water LOE) because this LOE represents a screening level assessment of risk only, and if used, should be evaluated more fully in a manner consistent with a baseline ecological risk assessment. We object to Directed Comment #3 (determination of benthic risks based on level 2 effects) on the ground that none of the level 2 models meet technical reliability criteria, and the models cannot be presumed to be predictive of sediment toxicity. We object to Directed Comment #4 (use of all COCs with hazard quotients greater or equal to 1 to identify areas of sediment contamination for evaluation in the draft FS) on the ground that the comment overlooks the difference between measurement and assessment endpoints and is contrary to EPA guidance. We object to Directed Comment #5 to the extent that we are unable to reach agreement with EPA on technically valid reliability criteria. We object to Directed Comments # 7 and #8 on the ground that they are factually incorrect. We object to Directed Comment #10 (development of PRGs for chemicals that exceed water quality criteria) because this evaluation was a screening level assessment only and does not necessarily indicate an unacceptable risk to human health for these chemicals, and because the LWG continues to disagree that MCLs are ARARs for surface water or TZW and that AWQC are ARARs for TZW.

The LWG is preparing detailed technical responses to the entire set of preliminary comments to inform our discussions concerning finalization of the risk assessments. In the meantime, we hope that EPA will confirm that our understanding of EPA's intended use of the directed comments is correct.

Sincerely,

Bob Wyatt

Comment	Reasons for Our Disagreement
1. Use the Logistic Regression Model for the development of site specific SQGs. These SQGs should be used in conjunction with generic SQGs and SQGs generated based on the logistic regression model to identify areas of sediment contamination for evaluation in the draft FS.	The LRM and generic SQGs failed to predict site-specific bioassay results with $\leq$ 20% false positive and false negative rates and $\geq$ 80% overall reliability and so are invalid. On what grounds is EPA directing the LWG to use invalid benthic toxicity models?
2. Retain the Transition Zone Water LOE as a measure of benthic risk. This information may be used in the assessment of groundwater upwelling and the evaluation of CDFs, CADs and sediment caps in the draft FS.	In order for the LWG to retain TZW as a measure of benthic risk, EPA must either a) acknowledge that the draft BERA contains only a screening level assessment of TZW risk, and agree to use the results accordingly, or b) permit the LWG to assess TZW risk in the final BERA in a manner consistent with the conduct of a baseline ecological risk assessment.
3. Benthic risks should be determined based on both level 2 and level 3 effects identified from the sediment toxicity tests performed at the site. This information should be used to identify areas of sediment contamination for evaluation in the draft FS.	None of the benthic toxicity models could predict Level 2 effects in the site-specific bioassays site-specific bioassay results with $\leq$ 20% false positive and false negative rates and $\geq$ 80% overall reliability. The low SQGs were good for predicting "clean" (i.e., Level 0 or Level 1) stations because their false negative rates were $\leq$ 20%. Their false positive rates were > 20%, i.e., too high to use them as predictors of Level 2 hits. The LWG is willing to have further discussions with EPA about how level 2 bioassays might be used to help determine benthic community risks.
4. All COCs with hazard quotients greater than or equal to 1 must be identified as potentially posing unacceptable risk. This information will be used to identify areas of sediment contamination for evaluation in the draft FS.	Conforming with this directive would violate OSWER Directive 9285.7-28 P, which states the following: 1. "Sufficient information should be collected in the ecological risk assessment to allow the risk assessor to make a reasoned decision about: 1) causality between levels of contamination and effects, 2) whether the observed or predicted adverse effects on the site's local population or community is of sufficient magnitude, severity, areal extent, and duration that they will not be able to recover and/or maintain themselves in a healthy state, and (3) whether these effects appear to exceed the natural changes in the component typical of similar non-site-impacted habitats (i.e., reference areas)." 2. "The goal of the Superfund program is to select a response action that will result in the recovery and/or maintenance of healthy local populations/communities of ecological receptors.'
5. Generic SQGs that meet the reliability analysis requirements must be included in the assessment of benthic risk. This information will be used to identify areas of sediment contamination for evaluation in the draft FS.	The LWG objects only to the extent that we are unable to reach agreement with EPA on technically valid reliability criteria.
7. All chemicals identified as posing unacceptable risks from lines of evidence EPA directed	The comment is factually incorrect. COCs were defined in accordance with EPA's BERA problem formulation and all COCs are listed in Table 11-2. Also, the draft BERA neither describes nor makes any risk

LWG to use, but which were eliminated by inappropriate LWG risk management decisions prior to the completion of risk characterization, must also be incorporated in Table 11-2 of the BERA.	management decisions.
8. Table 11-2 must either amended, or split into multiple tables, so that it provides information on both which lines of evidence any given chemical poses unacceptable risks, and the magnitude of the identified risks. As currently structured, Table 11-2 provides little more than an incomplete list of chemicals identified as posing unacceptable risks to one or more receptors, and provides no information on the magnitude of risks.	The comment is factually incorrect. COCs were defined in accordance with EPA's BERA problem formulation and <u>all</u> COCs are listed in Table 11-2. Also, Table 11-2 does provide information about magnitude of risk.
10. Chemicals present in surface water and transition zone water evaluated above the relevant a human health water quality criteria (i.e., SDWA MCLs and CWA AWQCs) should be carried forward into the Portland Harbor FS and used for the development of PRGs.	The human health water quality criteria (i.e., SDWA MCLs and CWA AWQCs) were used in the BHHRA for screening purposes. Exceedance of these criteria did not necessarily indicate an unacceptable risk to human health in the BHHRA, so the criteria should not be used to determine the need for risk-based PRGs. For example, many chemicals were detected in TZW at concentrations above MCLs, but these chemicals were not found to pose unacceptable risks to human health under the hypothetical future domestic water use scenario. Furthermore, for reasons previously discussed with EPA, the LWG disagrees that MCLs are ARARs for surface water and TZW and that AWQC are ARARs for TZW.